

MATH 584
Technology and Communication
in Mathematics Education
Spring 2008

Capstone Course normally taken in final semester of graduate study. Application of a variety of strategies and use of multiple sources of information and technology to solve problems. Students draw upon previous course work as they conduct investigations and present mathematical ideas orally, in writing, and by demonstration. Includes formal and informal presentations in groups or individually. Presentations may occur at off-campus sites.

Students are expected to create and use various representations and models to organize, record, and communicate mathematical ideas. By consolidating their mathematical thinking through communication, students will also be able to analyze and evaluate the mathematical strategies of others through peer review. Current technology will aid both in the investigation of problems and the presentation of results.

Prerequisite: MATH 509 with grade of C or better.

Instructor: Scott Beslin
106-D Peltier
(985) 448-4384
Scott.beslin@nicholls.edu

Mathematics Department: 108 Peltier (985) 448-4381

Materials: Computing Facility and Excel / MS Word / PowerPoint Facility

Student Outcome Objectives: The objectives of this course are based on the NCTM Program Standards for mathematics education and on core content criteria developed by the Louisiana PK-16+ Consortia.

Upon completion of the course, the students will be able to:

1. use technology to create documents, gather data, model phenomena, validate models, and make presentations.
2. deliver lessons and presentations, technology-based and otherwise, to classmates, faculty, and students.
3. work in cooperative groups and write formal reports.
4. disseminate results of research to professional organizations by means of scholarly presentations.
5. draw upon previous course work to model and investigate problems.
6. construct and apply structures in one or more of the areas of algebra, number theory, analysis, geometry, probability, statistics, and discrete mathematics.

Attendance. Students are required to attend class regularly and punctually. Attendance records will be kept. Roll may be called at different times during the class period. A student's failure to attend class will be reported to the administration, as mandated by the University. A student having at least three unexcused absences may be dropped from the class. **Tardiness is treated as an absence.** Anyone with more than **two** absences, excused or unexcused, should withdraw from the course. **Students are responsible for being aware of any changes in topics or schedule.** Students are responsible for having assignments in on time, and for obtaining any class notes given in their absence. Class participation is required. **You must attend class. There is a participation grade.**

There is a participation grade. **You must attend class. Participation grades cannot be made up under any circumstances. "Participation" means being physically present in class during class time.** The participation grade carries a weight of 10%. The grade is based on the percentage of class meetings in which the student participates.

The department strongly discourages administrative adds after the tenth class day. Such an add requires the permission of the instructor and the department head. Absolutely no administrative adds will be permitted on or following the fourteenth class day.

Final Grade will be determined by the following scheme:

<u>Weight</u>	<u>Item</u>
10%	Participation
90%	In-class assessments (<i>Quizzes</i> cannot be made up.)

Scale: 89.5 – 100 A
79.5 – 89.5 B
69.5 – 79.5 C
59.5 – 69.5 D

The participation grade carries a weight of 10%. The grade is based on the percentage of class meetings in which the student participates. We have a total of 13 total class meetings. Attendance is 10% of the final grade. The participation grade is as follows.

<u>Number of Semester Absences Accumulated by Student</u>	<u>Participation Contributions</u>
0 or 1	10
2	8
more than 3	0

Methods of Evaluation.

1. In-class presentations (individual, group)
2. Out-of-class presentations (individual, group)
3. One organized, comprehensive notebook of research activities
4. One major out-of-class presentation to selected audience
5. One written examination
6. One oral examination

Methods of Assessment have four focus areas: ALGEBRA, TRIGONOMETRY / GEOMETRY, PRECALCULUS, and CALCULUS. Presentations are subject to PEER REVIEW.

Disciplinary action for academic dishonesty will be handled according to the Code of Student Conduct. Dishonesty will not be tolerated.

Cheating / Academic Honesty Policy: The University expects all students to maintain absolute integrity and a high standard of individual honor in all academic work. Students caught cheating will be disciplined according to the process described in Section 1.9 of the Code of Student Conduct.

Americans with Disabilities Act: If you have a documented disability that requires assistance, you will need to register with the Office of Disability Services for coordination of your academic accommodations. The Office of Disability Services is located in Peltier Hall, Room 100-A. The phone number is 985-448-4430 (TDD 449-7002).

Academic Grievances:

The proper procedure for filing grade appeals or grievances related to academic matters is listed in Section 5 of the Code of Student Conduct and at the following link: http://www.nicholls.edu/documents/student_life/code_of_conduct.pdf.

Continued Learning following an Extreme Emergency:

In order to make continued learning possible following an extreme emergency, **students are responsible for:**

- reading regular emergency notifications on the NSU website;
- knowing how to use and access Blackboard (or university designated electronic delivery system);
- being familiar with emergency guidelines;
- evacuating textbooks and other course materials;
- knowing their Blackboard (or designated system) student login and password;
- contacting faculty regarding their intentions for completing the course.